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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/768,761
Filing Date: January 29, 2004
Appellant(s): BENDALL ET AL.

Denis J. Sullivan
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 6/19/2008 appealing from the Office action mailed 7/25/2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is incorrect. The status of the dependent claims (11-14, 17-34) was originally misidentified by Examiner in the Office action of 7/25/2007, and subsequently misidentified by Appellant. The status of the independent claim (10) was correctly identified by Examiner in the Office action of 7/25/2007, and misconstrued by Appellant.

A correct statement of the status of the claims is as follows:

Claims 10-14 and 17-34 are under final rejection.

Claims 1-9, 15, 16 and 35-40 stand withdrawn from consideration.

Claims 10, 12-14, 17, 19-21, 23-28, 30, 33 and 34 stand rejected under 35 U.S.C. § 103(a) as being obvious over Murata (2001/0051762) in view of Hill (6,929,600) and in further view of Chikama (5,002,041).

Claim 11 stands rejected under U.S.C. § 103(a) as being unpatentable over Murata (2001/0051762) in view of Hill (6,929,600) and Chikama (5,002,041) and in further view of Pearlman (5,347,992).

Claims 18, 22, 29, 31 and 32 stand rejected under U.S.C. § 103(a) as being unpatentable over Murata (2001/0051762) in view of Hill (6,929,600) and Chikama (5,002,041) and in further view of Saito (6,184,922).

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is incorrect. As noted above:

Claims 10, 12-14, 17, 19-21, 23-28, 30, 33 and 34 stand rejected under 35 U.S.C. § 103(a) as being obvious over Murata (2001/0051762) in view of Hill (6,929,600) and in further view of Chikama (5,002,041).

Claim 11 stands rejected under U.S.C. § 103(a) as being unpatentable over Murata (2001/0051762) in view of Hill (6,929,600) and Chikama (5,002,041) and in further view of Pearlman (5,347,992).

Claims 18, 22, 29, 31 and 32 stand rejected under U.S.C. § 103(a) as being unpatentable over Murata (2001/0051762) in view of Hill (6,929,600) and Chikama (5,002,041) and in further view of Saito (6,184,922).

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

2001/0051762	MURATA	12-2001
6,929,600	HILL	08-2005
5,002,041	CHIKAMA	03-1991
5,347,992	PEARLMAN	09-1994
6,184,922	SAITO	02-2001

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

- [01] Claims 10,12-14,17,19-21,23-28,30,33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murata (2001/0051762) in view of Hill (6,929,600) and in further view of Chikama (5,002,041).
- [02] With regard to claim 10:
- [02a] Murata discloses a modular visual inspection system for viewing the interior of a structure, comprising:
- a base unit element comprising a memory element ("memory card 113," [0103], a processor element ("image processing circuit 111," [0103]), and a modular light source ("lamp 64," [0058]);
 - a unitary control and display handset element comprising a screen element for viewing the interior of the structure ("display device 10," [0045]) and an articulation control element ("motor-driven angling unit 17," [0046]);
 - an insertion element for imaging the interior of the structure, said insertion element comprising an imaging sensor ("charge-coupled device (CCD) 41," [0053]) and an elongated portion ("elongated insertion member 2 that is flexible," [0045]);
 - wherein the base unit element is in electro-optical communication with the unitary control and display handset element,

- wherein said insertion element can be connected to said unitary control and display handset element.

[02b] Murata does not disclose

- that there are a plurality of insertion elements, wherein each one of said plurality of insertion elements can be used without modification with said control and display element, wherein said plurality of insertion elements include at least two insertion elements have different physical or optical characteristics.

[02c] Hill discloses

- a "connector 136" that "is preferably dimensioned to make a secure, friction fit with the universal adaptor 140," wherein "connector 136 may be slid up and down the stylet 104 to provide connection to the universal adaptor 140 for a variety of endotracheal tubes having various lengths."

[02d] At the time of the invention, it would have been obvious to a person of ordinary skill in the art to provide the endoscope system of Murata with insertion elements of various lengths as taught by Hill. It is well-known that endoscopes may be used in a variety of procedures for which different insertion elements may be optimal.

[02e] Murata does not disclose that the elongated portion is braided.

[02f] Chikama discloses the following in 1/52-59:

A conventional insertion portion (flexible tube structure) for an endoscope ... comprises a holder coil formed by winding a strip-like plate, a braid tube formed around the outer periphery of the holder coil, and an outer sheath of a resin covering the braid tube.

[02g] At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use convention elements in the construction of Murata's elongated portion. Braids

are conventionally used to construct elongated insertion portions in endoscopes because they are strong and flexible.

- [03] With regard to claims 13,14,17: Murata discloses an aperture ("card connector 112," [0103]) to allow insertion of an electronic storage media comprising a PC cards ("113," as noted above).
- [04] With regard to claim 12: Murata discloses a keyboard ("152," [0130], Fig 12).
- [05] With regard to claims 19,20: Murata discloses that the base unit further comprises at least one connectivity element, wherein the at least one connectivity element is a serial port ("serial communication," [0131]).
- [06] With regard to claim 23: Murata discloses a storage reel ("cylindrical drum 4" [0045]) for storing said insertion element.
- [07] With regard to claim 24: Murata discloses a weatherproof container element ("a box-like main unit 5," [0045]) sized such that the base unit element fits within the container element.
- [08] With regard to claim 26: Murata discloses an LCD ("LCD panel of the display device 10," [0056]) which is inherently capable of showing images in a 16:9 format.
- [09] With regard to claim 27: Murata discloses a control and display element, but does not disclose an anti-glare element. At the time of the invention, it would have been obvious to a person of ordinary skill in the art that the control and display element disclose by Murata comprise an anti-glare element. A skilled artisan would be motivated to do so in order to enable better viewing of images.
- [10] With regard to claim 28: Murata discloses a joystick ("remote control unit 8," [0047]).
- [11] With regard to claim 30: Murata discloses at least one servo motor ("motor-driven angling unit 17," [0046]).

- [12] With regard to claim 33: The memory element disclosed by Murata is capable of storing data representing images ([0103]).
- [13] With regard to claim 34: Murata discloses that the memory element of the base unit element includes a computer program for generating reports ("reading or writing..." [0103]) based on data obtained by the imaging sensor of each of said plurality of insertion elements.

Additional Claim Rejections - 35 USC § 103

- [14] Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Murata in view of Pearlman (5,347,992).

[14a] Murata does not disclose a fluid reservoir.

[14b] Pearlman discloses the following in 1/11-23:

During endoscopic procedures, the surgeon must frequently irrigate and then suction a region in which he is operating. He is customarily provided with a handpiece that includes two trumpet-type valves, one for the liquid and the other for suction. His task in addition to manipulation of the various optical and surgical appliances associated with an endoscope is to irrigate regions of interest, and to suction out liquids and debris. Anything which can simplify this assortment of tasks is a welcome improvement. Convenience of grasp is a further convenience. If an appliance can only be gripped in one orientation, it is likely that in other alignments it will be inconvenient to manipulate.

[14c] At the time of the invention, it would have been obvious to a person of ordinary skill in the art that the endoscope disclosed by Murata have an irrigation channel which necessitates a fluid reservoir, as disclosed by Pearlman. A skilled artisan would be motivated to do so because endoscopic procedures conventionally require irrigation of regions of interest; and irrigation requires a fluid reservoir from which to draw irrigation fluid.

Additional Claim Rejections - 35 USC § 103

- [15] Claims 18, 22, 29, 31, 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murata in view of Saito (6,184,922).
- [16] With regard to claim 18:
- [16a] Murata does not disclose that the processor element of the base unit element is capable of video compression.
- [16b] Saito discloses a "motion-picture data compressing means" (4/42) which compresses endoscope images prior to storage. At the time of the invention, it would have been obvious to a person of ordinary skill in the art that the memory element disclosed by Murata store compressed images as taught by Saito. A skilled artisan would be motivated to do so in order to reduce the required size of the memory element, or to allow a greater amount of data to be stored on a memory element of finite size.
- [17] With regard to claim 22:
- [17a] Murata does not disclose that the modular light source is selected from the group of light sources consisting of: LEDs, arc discharge lamps, lasers, UV lamps, and IR lamps.
- [17b] Saito discloses an arc discharge lamp ("white light source 121 such as a xenon lamp" (14/49). At the time of the invention, it would have been obvious to a person of ordinary skill in the art that in reduction to practice the lamp disclosed by Murata take the particular form of an arc discharge lamp. A skilled artisan would be motivated to do so in order to provide strong white light, as xenon lamps are well known to provide.
- [18] With regard to claim 29:

- [18a] Murata does not disclose a switch to freeze an image displayed by said control and display element.
- [18b] Saito discloses a "release switch 48" (5/54-60) which freezes a displayed image in the form of a "still image to be recorded." At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include a freeze switch in the control and display element disclosed by Murata. A skilled artisan would be motivated to do so in order to allow a still image to be recorded to be viewed at a later date.
- [19] With regard to claims 31,32:
- [19a] Murata does not disclose that the image sensor gathers sufficient data to create a selected video signal selected from the group of video signals consisting of: PAL, NTSC, and progressive scan.
- [19b] Saito discloses a "light source unit 103" which "agree[s] with the frame frequency of a video signal (29.97 Hz in the NTSC system). At the time of the invention, it would have been obvious to a person of ordinary skill in the art that the displayed video signal disclosed by Murata take the particular form of an NTSC signal. A skilled artisan would be motivated to use conventional elements. In reduction to practice, NTSC is a conventional video signal.

(10) Response to Argument

[20] As noted above, it is maintained that claim 10 is unpatentable over Murata in view of Hill. On page 16, Appellants disagree with the Examiner's reliance on Murata as disclosing a unitary control and display handset element.

[21] In particular, Appellant argues on page 17 that "the remote control unit 8 and display device 10 [disclosed by Murata] are separate and not part of a unitary element, with the display device 10 being fixed to the box-like main unit 5 by a monopode or column 9 that is not part of a handset."

The controverted portion of the claim reads as follows:

...

a **unitary** control and display **handset** element **comprising** a screen element for viewing the interior of the structure and an articulation control element;

...

[21b] There seems to be no disagreement that Murata discloses both a screen element and an articulation control element: "display device 10" and "remote control unit 8", respectively.

The question is whether or not they "compose" a "unitary" "handset" element.

[22] Although the differences between Figure 1 of Murata and Figure 3 of Appellant's application are clear, the claim language can (and must) be interpreted broadly.

[23] Firstly, what does it mean to "compose" something which is "unitary"?

[23a] *Compose* infers upon some element or elements a non-exclusive membership in something greater. For example, a shortstop and a catcher "compose" a baseball team.

[23b] According to dictionary.com, *unit* is defined as

1. a single thing or person.

2. any group of things or persons regarded as an entity.

- [23c] The first definition is precluded, since the "unitary control and display handset element" is defined as having at least two elements: "a screen element" and "an articulation control element". The second definition may be applied, since "a screen element" and "an articulation control element" may be considered as a part of a "group of things regarded as an entity". The distinction that they are *part of* a group of things regarded as an entity is critical, since claim 10 states that the "unitary" whole *comprises* first and second elements. Therefore, if the "display device 10" and "remote control 8" disclosed by Murata may be broadly and reasonably interpreted as being *part of* (i.e. they compose) something which may be *regarded as an entity* (i.e. something which is unitary), then the controverted claim limitation is met.
- [23d] It is maintained that "10" and "8" are in fact part of a unitary "endoscope system 1", as disclosed by Murata. To reprise the above example, a "unitary" baseball team "comprises" a shortstop and a catcher. This is the case because a baseball team having nine fielders may be regarded as an entity; and because "comprises" does not infer exclusivity upon the two of the nine fielders which are listed. Similarly, the "endoscope system 1" of Murata may be regarded as an entity which includes, among other things, "display device 10" and "remote control unit 8".
- [24] Secondly, what weight is given to "handset" in the phrase "unitary control and display handset element"?
- [24a] Appellant argues that the invention of claim 10 "provides enhanced portability and allows an inspector conducting a field inspection to both operate the visual inspection system and view the resulting images using a single, portable, handheld element" (page 19). Yet there

is no indication that Murata does not enable an inspector to both operate the visual inspection system and view the resulting images.

[24b] On the contrary, Murata discloses that precisely. The "remote control unit 8" is clearly intended to be manipulated by hand: it comprises "[a] plurality of control mode selection switches 82 and an angling lever 83" ([0083]). The "display device 10" is also intended to be manipulated by hand: it is "held at the tip end of a stretchable and contractile monopode or column 9 so that the display device 10 can be swiveled freely" ([0045]). Furthermore the "endoscope system 1", having a "battery" and a "stowage lid" ([0045]), is clearly designed with the intention of enhancing portability.

[24c] In a claim to an apparatus, the word "handset" provides no distinct structural limitation. In summary, the only weight which can be given to "handset" is that the element must be capable of manipulation by hand. Murata clearly meets this limitation.

[25] As noted above, it is maintained that claim 10 is unpatentable over Murata in view of Hill. On page 16, Appellant disagrees with the Examiner's reliance on Murata as disclosing that a plurality of insertion elements can be connected to said unitary control and display handset element. Appellant has failed to consider that Hill (6,929,600) is relied upon for a rejection of claim 10 under 35 U.S.C. 103(a).

[25a] In particular, Appellant argues on page 20 that "[a]s is clearly shown in each of the embodiments disclosed in Murata '762, there is but a single endoscope 3 that is connected to the box-like main unit 5." It is conceded, as noted in paragraph [04b] of the outstanding final Office action (10/29/07) that:

Murata does not disclose that there are a plurality of insertion elements, wherein each one of said plurality of insertion elements can be used without

modification with said control and display element, wherein said plurality of insertion elements include at least two insertion elements have different physical or optical characteristics.

- [25b] It is maintained that the insertion element disclosed by Murata can be connected to said unitary control and display handset element (see Figure 1).
- [25c] Furthermore, it is maintained that Hill shows the obviousness of providing a plurality of insertion elements for use in a single device, as noted above.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

((11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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Examiner, Art Unit 3739

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/Linda C Dvorak/
Supervisory Patent Examiner, Art Unit 3739

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